Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Complete if Known Substitute for form 1449A/PTO Application Number 09/437,764 INFORMATION DISCLOSURE Filing Date November 9, 1999 First Named Inventor Louis C. Yun STATEMENT BY APPLICANT Group Art Unit 2662 (use as many sheets as necessary) Examiner Name J. Logsdon 2 Attorney Docket Number Sheet of 15685P032

| | | | | U.S. PATENT DOCUMENTS | | |
|-----------------------|--------------|----------------------|-----------------------------------|---|--|--|
| Examiner Initials* | Cite No.' | U.S. Pater Number | Kind Code ² (if known) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | OPORT ORIGINALITY PAL | • | |
| | | | | 17/ | C. To | |
| | | | | | Ø | |
| | | | | | | |
| | | | | | DE | PEWED |
| | | | | | חבנ | CEIVED |
| | | | | | MAR | 0 6 2002 |
| | | | | | | |
| | | | | | Technolo | gy Center 2600 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | 1 | | | | |

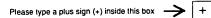
| | FOREIGN PATENT DOCUMENTS | | | | | | | | |
|-----------------------|--------------------------|-------------------------|------------|--------------------------------------|-----------------------------|------------------------------|--|----------|--|
| Examiner Initials* | Cite | Foreign Patent Document | | | Name of Patentee or | Date of Publication of | Pages, Columns, Lines, Where Relevant | Te | |
| | No.' | Office ³ | Number* | Kind Code ^s (if known) | Applicant of Cited Document | Cited Document MM-DD-YYYY | Passages or Relevant Figures Appear | <u> </u> | |
| hhl | 1 | W | O 97/08849 | | WIPO | | | | |
| 710- | | | | | | | | \perp | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | 1 | |

Examiner Signature Date Considered Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

'Unique citation designation number. 'See attached Kinds of U.S. Patent Documents. 'Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| Substitute for | r form 1449A/PTO | | | Complete if Known | | | |
|------------------------|------------------|---------|-------|------------------------|------------------|--|--|
| | | | NIDE. | Application Number | 09/437,764 | | |
| INFOR | MATION I | DISCLOS | OHE | Filing Date | November 9, 1999 | | |
| CTATE | MENT RY | ΔPPLIC | ΔΝΤ | First Named Inventor | Louis C. Yun | | |
| STATEMENT BY APPLICANT | | | | Group Art Unit | 2662 | | |
| (s) | | | | Examiner Name | J. Logsdon | | |
| M2 Shiget | 2 | of | 2 | Attorney Docket Number | 15685P032 | | |
| 4.7 | | | | | | | |

| 24 | | OTHER ART - NON PATENT LITERATURE DOCUMENTS |
|--------------------|---|---|
| Examiner Cite No.' | | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |
| | 1 | Ottersten, B., "Array Processing for Wireless Communications," Proc. 8th IEEE Signal Processing Workshop on Statistical Signal and Array Proc., June 1996, pgs. 466-473. |
| | | COPY ORIGINALLY FILED |
| | , | SINALLY FILES |
| | | 160 |
| | | |
| | | RECEIVED |
| <u> </u> | | MAR 0 6 2002 |
| | | Technology Center 2600 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| Examiner | Date |
|------------|------------|
| Signature | Considered |
| Olgitatalo | |

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication

'Unique citation designation number. 'Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08A (08-00)

| OTP E JOY | Substitute f | for form 1449A/PT0 | | | Co | omplete if Known |
|--------------|--------------|--------------------|--------|-------|------------------------|------------------|
| Y | \=0: | | | OCUDE | Application Number | 09/437,764 |
| MAR 0 5 2002 | 4) INLO | RMATION | DISCL | JOURE | Filing Date | November 9, 1999 |
| MAR 0 3 | STAT | EMENT BY | Y APPL | ICANT | First Named Inventor | Louis C. Yun |
| \ <u>.</u> | / - | (use as many shee | | | Group Art Unit | 2662 |
| TRADEMARY | - | | | | Examiner Name | J. Logsdon |
| - FINANCE | Sheet | 1 | of | 2 | Attorney Docket Number | 15685P032 |

| Date of Publication of Pages, Columns, Lines, | | nt Document | U.S. Paten | | |
|---|---|--------------------------------------|------------|--------------|-----------------------|
| cant Cited Document MM-DD-YYYY Pigures Appear | Name of Patentee or Applicant of Cited Document | Kind Code ² (if known) | Number | Cite No.¹ | Examiner Initials* |
| | | | | | |
| | | | | | - |
| | | | | | |
| | | | | | |
| | | | | | |
| RECEIVE | | | | | |
| MAR 1 5 20 | | | _ | - | |
| Technology Cente | | | | | |
| . | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | 01- | For | eign Patent Docur | nent | Name of Patentee or | Date of Publication of | Pages, Columns, Lines, | 7 |
|-----------------------|--------------------------|---------------------|---------------------|--------------------------------------|-----------------------------|------------------------------|--|--------------|
| Examiner Initials* | Cite No. ¹ | Office ³ | Number ⁴ | Kind Code ^s (if known) | Applicant of Cited Document | Cited Document MM-DD-YYYY | Where Relevant Passages or Relevant Figures Appear | Т |
| 1/2 | 1 | W | O 97/02262 | | WIPO | | | |
| | | | | | | | | \downarrow |
| | | | | | | | | + |
| | | | | | | | | \perp |
| | | | | | | | | + |
| | | | | | | | | + |
| | | | | | | | | + |
| | | - | * . | | | | | + |
| | | | | | | _ | | + |
| | | | | | | | | |

| Examiner Signature | JOE Lagsdon | Date Considered C/S/03 | |
|-----------------------|-------------|------------------------|--|

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

'Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plas sign (+) inside this box

Sheet

| _ | |
|---|---|
| ~ | + |

of

2

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

2

 Complete if Known

 Application Number
 09/437,764

 Filing Date
 November 9, 1999

 First Named Inventor
 Louis C. Yun

 Group Art Unit
 2662

 Examiner Name
 J. Logsdon

 Attorney Docket Number
 15685P032

| | | OTHER ART - NON PATENT LITERATURE DOCUMENTS | |
|----------------------|--------------|---|----|
| xaminer Initials* | Cite No.¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T² |
| | 1 | Farsakh et al., "A REAL TIME DOWNLINK CHANNEL ALLOCATION SCHEME FOR AN SDMA MOBILE RADIO SYSTEM," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, Vol. 3, 10/18/96, pgs. 1215-1220. | |
| | 2 | Farsakh et al., "CHANNEL ALLOCATION AND DOWNLINK BEAMFORMING IN AN SDMA MOBILE RADIO SYSTEM," PIMRC '95, Wireless: Merging onto the Information Superhighway, 6th IEEE International Symposium on Toronto, Ont., Canada, 9/27-29/95, pgs. 687-691. | |
| | | RECEIVED | |
| | | RECEIVED MAR 1 5 2002 | |
| | | Technology Center | |
| | | | |
| | | | |
| | | | |
| | | | |

| Examiner | Date | |
|-----------|------------|--|
| Signature | Considered | |
| | 1 | |

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication

'Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/08A (08-00)
Approved or use through 10/31/2002. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Complete if Known Substitute for form 1449A/PTO Application Number 09/437,764 INFORMATION DISCLOSURE November 9, 1999 Filing Date STATEMENT BY APPLICANT First Named Inventor Louis C. Yun Group Art Unit 2662 (use as many sheets as necessary) J. Logsdon **Examiner Name Sheet** Attorney Docket Number 1 of 1 15685P032 U.S. PATENT DOCUMENTS U.S. Patent Document Pages, Columns, Lines, Where Relevant Date of Publication of Name of Patentee or Applicant of Cited Document Examiner Cite Cited Document Kind Code² Number Passages or Relevant No.1 MM-DD-YYYY (if known) Figures Appear 10-23-1990 4,965,732 Roy, III, et al. 05-07-1996 5,515,378 P FROX III, et al. MAY 1 3 2002 RADEM FOREIGN PATENT DUCUMENTS Pages, Columns, Lines. Foreign Patent Document Date of Publication of Name of Patentee or Examine Cite Where Relevant Cited Document Kind Code^s Applicant of Cited Document No.1 Office³ Number Passages or Relevant (if known) Figures Appear WO 97/02262 WIPO

| Examiner | | Date | 1.10/00 | |
|-----------|--------------|------------|---------|--|
| Signature | 408 Logs don | Considered | 6/8/02 | |

'Unique citation designation number. 'See attached Kinds of U.S. Patent Documents. 'Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.